

SYNOPSIS OF THE NORTH AMERICAN SPECIES OF AMMOPHILA.

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Recently through the kindness of the authorities of the Academy of natural sciences of Philadelphia I had the opportunity of studying the types of AMMOPHILA contained in their collection. A synopsis of the species was arranged in tabular form with the intention of further work on the group. As this plan cannot now be carried out it seems advisable to publish the notes made while in Philadelphia for the assistance of any who wish to study this interesting genus. In the original table have been interpolated the additional North American species not contained at the Philadelphia academy, their places having been determined from the descriptions alone. Owing to the incomplete diagnoses of some authors a number of these species have been placed out of their natural order, and hence the table is in part more artificial than is to be desired; but in the main a natural relationship is expressed.

It is strange that the study of such large, common, and intelligent insects should have been so long neglected. Possibly this is due to the uncertainty in the determination of the species of the older authors and to the confusion existing between the homonymous but different species of Dahlbom and Lepeletier. But as in the northeastern part of the United States the species are not numerous the student of at least that section should experience but little trouble in naming his captures. For example, some two hundred specimens collected by myself in central and southern Texas, Illinois, and New England yield only three PSAMMOPHILAS, nine AMMOPHILAS and the one COLOPTERA, thirteen species, of which ten are found in the Northeastern States. In order of abundance of individuals these species are: *procera*, *nigricans*, *urnaria*, *violaceipennis*, *extremitata*, *inepta* (Tex.), *abbreviata*, *vulgaris*, *grossa* (Tex.), *luctuosa*, *gracilis*, *wrightii* (Tex.), and an undescribed species from Illinois. It will be noticed that most of these are the species of the older authors. On account of the brevity of their descriptions the determination of these can best be accomplished by eliminating the other species found in the type locality. By this method, and as they seem to be the most abundant forms, the older species can be readily fixed. A careful redescription of them is desired from the next monographer.

A number of changes in nomenclature are instituted, whereby several well-known names are dropped as synonyms. The dubious *violaceipennis* is a common form of the United States, concerning whose identity it is indeed strange that a doubt should ever have existed. The Brazilian *urnaria* of Lepeletier is not the

same as Dahlbom's species: *procera* Lep. is not *procera* Dahlb., but is the other sex of his *intercepta* and both are synonyms of *nigricans* Dahlb.; *gracilis* Cam. is not *gracilis* Lep., while the Canadian form of same name seems to be a third species.

With such well-known and long established names as *cementaria*, *gryphus*, *procera*, *robusta*, *macra*, *anomala*, etc., untenable, the future student will hesitate before describing new species. However the Mexican and Central American species of Peter Cameron seem valid and in little danger of confluence. The stumbling block of the earlier describers has often been the association of the sexes, since a distinct dimorphism often prevails. Generally the males are more slender, more hirsute, and more brilliantly marked than the females, and in those species with the abdomen partially red the males frequently have the black encroaching dorsally as a median line. Their clasping sexual organs and the narrow and straight-sided face are distinctive of this sex.

Of the species of the United States some difficulty might be experienced in differentiating between certain forms. For this reason a few supplementary notes on the common species are added:—

vulgaris is a small species, about three fourths of an inch in length. The mesonotum of the female generally has a deep median furrow. The striae of the metanotum are close together, oblique and well-cut, and are generally connected by a median line.

juncea is founded on a slender male with very fine transverse metanotal striae. The central portion of the disc is sometimes confusedly punctate and slightly hairy. It is a larger form than *vulgaris*.

strenua is about one inch in length and has complete transverse striae on the metanotum not quite so well marked as in *vulgaris* but rougher than in *juncea*. The anterior striae tend to become oblique. The female has a short narrow impressed line on the mesonotum.

urnaria. The obsolete striate arrangement of the punctures near the tegulae is quite characteristic and fairly constant in this species. The rather coarse striae of the metanotum are more or less oblique and frequently become rugulose on the disc as in *juncea*.

abbreviata is quite distinct among the local species by the acuminate clypeus of the male, the short pale golden macule of the mesopleurae, and the black abdomen.

nigricans also has the abdomen mostly black but the pleurae are entirely black and the wings darkened.

extrematata is quite distinct by the yellowish wings. The thorax of the female is matte-black and the abdomen contains a brighter red than in the other common forms.

procera is the only local species with complete and coarse transverse striae on the notum. It is also the largest of our species, some specimens attaining nearly an inch and a half in length.

It is believed that the following table will give a truthful determination of the species of this group as they have been defined, and since the species need no longer be confused it is hoped that an interest in their study may be aroused. Especially to be desired is the observation of the habits of these intelligent wasps. —a pleasant research,—for the ammophiles are intellectually superior to the other fossorial Hymenoptera, as the entertaining records of Fabre, the Peckhams, Williston, and others have shown.

TABLE OF THE NORTH AMERICAN SPECIES.

Front wings with three submarginal cells, submedian cell but little shorter than the median	2.
Front wings with but two submarginal cells	3.
2. Petiole of abdomen consisting of the first abdominal segment only (PSAMMOPHILA)	4.
Petiole of abdomen consisting of the entire first segment and at least the basal portion of the second (AMMOPHILA)	18.
3. Second and third submarginals united. Black species with the base of the abdomen red (anomalous species of <i>Ammophila</i>)	74.
Third submarginal cell wanting; submedian cell distinctly shorter than the median (COLOPTERA)	75.
4. Body wholly black, piceous-black, or blue-black	5.
Abdomen more or less ferruginous	7.
5. Metanotum centrally opaque, closely punctured 10. <i>piceiventris</i> Cam.	
Metanotum shining, transversely striolate	6.
6. Slender; pubescence in part whitish; face silvery; abdomen more or less purplish	
2. <i>luctuosa</i> Sm. ♂.	
Robust; pubescence black; face broad, black pubescent; abdomen black	
2. <i>luctuosa</i> Sm. ♀.	
7. Pubescence of thorax wholly black	8.
Pubescence more or less brownish, gray, or white	13.
8. Abdomen except the petiole entirely ferruginous	9.
Abdomen proper in part black	11.
9. Clypeus broadly projecting in the middle, the projection sinuated 6. <i>jason</i> Cam.	
The margin of the clypeus pluridentate	10.
10. Wings with a yellow tinge; metanotum obliquely rugose 3. <i>valida</i> Cress.	
Wings with a violaceous tinge; metanotum transversely striolated	
11. <i>quadridentata</i> Cam.	
11. Metathorax rugose; wings violaceous 8. <i>sonorensis</i> Cam.	
Metathorax trans-striate; wings violaceous-black to subhyaline	12.
12. Petiole of abdomen short, not extending beyond the hind trochanters; large species	
4. <i>grossa</i> Cress. ♀.	

- Petiole extending beyond the hind trochanters; smaller species variable in pubescence and wing-coloration 1. *violaceipennis* Lep.
13. Third submarginal cell small, barrel-shaped; eyes strongly convergent below 12. *pacifica* Mel. and Br.
- Third submarginal normal, *i. e.*, broader below than above 14.
14. Front and middle legs in part red 9. *morrisoni* Cam.
- Legs entirely black 15.
15. Petiole of abdomen short, not extending beyond hind trochanters; stout species 4. *grossa* Cress. ♂.
- Petiole much longer; smaller species 16.
16. Base of abdomen entirely ferruginous 17.
- Only the sides of the first and second segments reddish 5. *montana* Cam.
17. Legs densely pruinose 7. *alpestris* Cam.
- Legs sparsely pruinose 1. *violaceipennis* Lep. ♂.
18. Pro- or meso-notum transversely strigose 19.
- Disc of thorax punctured or smooth, never with complete transverse strigae 34.
19. Thorax or legs in part red 20.
- Ground color of thorax and legs entirely black 21.
20. Head red; metanotum transversely striate 28. *ferruginosa* Cress.
- Head black; metanotal striae becoming rugose laterally 30. *collaris* Cress.
21. Abdomen wholly black above 22.
- Abdomen in part red above 27.
22. Scutellum with strong longitudinal carinae 43. *ceres* Cam.
- Scutellum with longitudinal grooves or simply punctate 23.
23. Pleurae with golden to silvery spots; abdomen almost wholly black; clypeus of male acuminate 24.
- Pleurae with elongate silvery markings; third ventral in part red; clypeus of male not produced 25.
24. Tip of metapleurae with a marking of silvery pubescence 13. *abbreviata* Fabr.
- Tip of metathorax not marked with glistening pubescence 42. *aureonotata* Cam.
25. Face with silvery pile and pubescence; metathorax transversely striate 17. *gracilis* Lep.
- Face more or less silvery but with black pubescence also; metanotum with oblique striae at least in part 26.
26. Prothorax shorter, sculpture of thorax coarser and insect more pubescent 23. *barbata* Sm.
- Prothorax longer and comparatively stout; sculpture of thorax less coarse 16. *procera* Dahlb.
27. Black pilose species; upper part of metathorax velvet black, and arcuately strigose; wings fulvous 31. *extremitata* Cress. ♂.
- Not such species; pile in part lighter 28.
28. Metapleurae rugosely punctate 29.
- Metapleurae strigose 33.
29. Clypeus coarsely punctured; mesothorax punctured at middle but becoming strigose at the sides; disc of metanotum obliquely striated 27. *conditor* Sm.
- Species not conforming with all these characters 30.
30. Face with whitish pubescence; abdomen largely red 31.

- Face with black pubescence 32.
31. Legs completely black 32. *polita* Cress.
 Legs densely pruinose 46. *striolata* Cam.
32. Prothorax transversely striate 45. *championi* Cam.
 Prothorax smooth 25. *placida* Sm.
33. Abdomen almost wholly red 26. *saeva* Sm.
 Petiole and apical part of abdomen black 16. *procera* Dahlb.
34. Legs at least in large part red 35.
 Ground color of legs wholly black or piceous 40.
35. Head and clypeus black; metanotum at least centrally with transverse striae . 36.
 Metanotum sharply, densely, and obliquely striated; face and clypeus silvery
 19. *aberti* Hald.
36. Sides of thorax with markings of silvery pubescence; central part of metanotum pubescent 37.
 Pleurae and metanotum not pubescent, pleurae with three large silvery pruinose spots
 60. *femur-rubrum* Fox
37. First joint of petiole black, *i. e.*, with more black than second joint 38.
 First joint of petiole with more red than second joint; species of 16-25 mm.
 29. *pruinosa* Cress.
38. Pleurae with dense matted pubescence; species of 35 to 40 mm. 24. *yarrowi* Cress. ♀.
 Pleurae with sparser more erect hairs; species under 30 mm. 39.
39. Base of femora black; thorax not densely pubescent above 21. *breviceps* Sm.
 Four anterior legs red; thorax densely pubescent above 58. *comanche* Cam.
40. Wings yellowish or fulvous 41.
 Wings dark-violaceous to subhyaline 42.
41. Head and thorax matte-black, sparsely black pilose 31. *extremitata* Cress. ♀.
 Head and thorax bluish, densely fusco-pilose 44. *zanthoptera* Cam.
42. Mesopleurae with spots or oblique stripes of silvery golden color 43.
 Pleurae uniform in color, not with pubescent markings 61.
43. Thoracic notum with appressed sericeous pubescence and erect hairs 44.
 Thorax devoid of dense appressed pubescence but often with sparse to dense hairs
 and sometimes more or less pruinose 48.
44. Central space of metathorax closely pubescent 24. *yarrowi* Cress.
 Metathorax not pubescent centrally 45.
45. Abdomen largely red, the segments with a black dorsal spot 61. *nasalis* Prov.
 Abdomen nearly or wholly black 46.
46. The dilated part of the second segment except its hind margin red 18. *arvensis* Lep.
 Abdomen completely blue-black; third submarginal narrow; the sericeous pubescence
 confined to the front part of the thorax 47.
47. Metapleurae coarsely striated; hind coxae covered with silvery pubescence
 37. *miliaris* Cam.
 Metapleurae finely rugulose; hind coxae silvery above only . 13. *abbreviata* Fabr.
48. Central part of metathoracic disc rugulose, scutellum with longitudinal striae
 20. *fragilis* Sm.
 Central part but little roughened, generally more or less striated 49.
49. Small species clothed with silvery cinereous pubescence; metanotum with well-marked
 oblique striae generally connected by a median line 33. *vulgaris* Cress.

- Species of other character, the metanotum only rarely with a median line . . . 50.
50. Face covered with golden pubescence; abdomen largely reddish; clypeus not produced . . . 51.
 Pubescence of face of other color, if golden the abdomen is black and the clypeus of the male is produced . . . 52.
51. Punctures of thorax fine and sparse; scutellum strongly furrowed . . . 57. *chiriquensis* Cam.
 Punctures of thorax close; scutellum rugose . . . 53. *dejecta* Cam.
52. Head and thorax with sparse black but no silvery pubescence . . . 53.
 Pubescence of head (inclusive of face) and thorax in part silvery, gray, or fuscous . . . 55.
53. Mesonotum strigose or very thickly punctate towards the sides. Eastern species. . . 14. *urnaria* Dahlb.
 Mesonotum simply punctate. Mexican species . . . 54.
54. Ground color black over all . . . 40. *iridipennis* Cam.
 Abdomen with the second segment red . . . 50. *consors* Cam.
55. Scutellum sparsely punctate . . . 56.
 Scutellum deeply channeled longitudinally . . . 59.
56. Silvery mark of mesopleurae elongate; base of abdomen red . . . 57.
 Pleural spots short; abdomen nearly black; third submarginal cell narrow; clypeus of male produced . . . 58.
57. Dorsal furrow of mesonotum deep . . . 35. *strenua* Cress.
 Dorsal furrow of mesonotum indistinct . . . 52. *montezuma* Cam.
58. Metapleurae finely rugulose; third antennal joint nearly twice the length of the second . . . 13. *abbreviata* Fabr.
 Metapleurae coarsely striated; third antennal joint one fourth longer than the fourth . . . 37. *miliaris* Cam.
59. Thorax nearly impunctate, but covered with dense silvery pubescence; slender species . . . 36. *juncea* Cress.
 Thorax strongly punctured, its pubescence with long darker hairs intermixed. Mexican species . . . 60.
60. Third submarginal cell twice as wide at the bottom as at the top . . . 55. *azteca* Cam.
 Third submarginal only one fourth longer at the bottom than at the top—*gracilis* Cam.
61. Wings blackish; thorax black-sericeous; pubescence dense ♂, or sparser ♀ . . . 15. *nigricans* Dahlb.
 Wings sub- or fusco-hyaline . . . 62.
62. Abdomen without red markings . . . 63.
 Abdomen in part red . . . 65.
63. Blue-black species; pleurae more or less shining; face with sparse silvery pubescence . . . 64.
 Black species; pleurae opaque . . . 41. *centralis* Cam.
64. Pubescence sparse; hind tibiae with fulvous hairs . . . 38. *gaumeri* Cam.
 Pubescence dense, fuscous; legs with almost no hairs . . . 39. *micans* Cam.
65. Thorax opaque matte velvet-black on the sides; species of the United States . . . 66.
 Pleurae not matte-black . . . 67.
66. A spot of golden pubescence above the base of the middle and hind coxae . . . 31. *extremitata* Cress.
 No such spots present . . . *extremitata* var. *pictipennis* Walsh.
67. Pro- and meso-thorax silvery pruinose. Cuba. . . 62. *guerini* D. T.

- Thorax not pruinose; more or less polished. Mexico 68.
68. Metathorax transversely striate 71.
Metathorax transversely rugose or punctured 69.
69. Antennae reddish; scutellum channelled 49. *picipes* Cam.
Antennae black; scutellum rugose 70.
70. Face golden-pubescent 47. *alticola* Cam.
Face with sparse black hairs only 22. *atriceps* Smith
Face with silvery pubescence and black hairs 48. *trichiosoma* Cam.
71. Scutellum rugose or coarsely punctured 72.
Scutellum deeply longitudinally channelled 73.
Scutellum finely punctured; sides of thorax silvery pubescent 50. *consors* Cam. ♂.
72. Thoracic punctures close; metathorax trans-striate; hairs of face sparse
51. *nigrocaerulea* Cam.
Sculpture of thorax indistinct, the metanotal striae oblique; hairs of face dense and
silvery in the male 34. *mediata* Cress.
73. Thorax shining, punctured 54. *cora* Cam.
Thorax opaque, finely rugose 56. *voltanica* Cam.
74. Pubescence of body white 59. *nearctica* Kohl.
Pubescence of body black 31. *extremitata* Cress. ♂.
75. Small slender reddish species with long petiole and transversely striate thorax
63. *wrightii* Cress.

The following list includes the species of this group which have been described as from North America. The species are given in chronological order and show no phyletic sequence.

PSAMMOPHILA Dahlbom.

1. *violaceipennis* Lep., Hym., vol. 3, p. 370. (1845). Amer. bor.
cementaria Smith, Cat. Hym. Brit. mus., vol. 4, p. 223. (1856).
robusta Cress., Proc. Ent. soc. Phil., vol. 4, p. 461. ♀. (1865).
communis Cress., ibid., p. 462. ♂.
2. *luctuosa* Smith, Cat. Hym. Brit. mus., vol. 4, p. 224. ♀. (1856). Can. U. S., Mex.,
Cuba.
argentifrons Cress., Proc. Ent. soc. Phil., vol. 4, p. 462. ♂. (1865).
mexicana Sauss., Reise Novara. Hym., p. 25. (1868).
3. *valida* Cress., Proc. Ent. soc. Phil., vol. 4, p. 461. ♀. (1865). Col.
4. *grossa* Cress., Trans. Amer. ent. soc., vol. 4, p. 209. ♀. (1872). Tex.
Melander and Brues, Biol. bull., vol. 2, p. 41. ♂. (1902).
5. *montana* Cameron, Biol. Cent.-Amer. Hym., vol. 2, p. 20. ♂. (1888). Mex.
6. *jason* Cam., ibid., p. 20. ♀. Guatemala.
7. *alpestris* Cam., ibid., p. 21. ♂. Panama.
8. *sonorensis* Cam., ibid., p. 21. ♀. Mex.
9. *morrisoni* Cam., ibid., p. 21. ♂. Mex.
10. *piceiventris* Cam., ibid., p. 22. ♀. Guatemala.
11. *quadridentata* Cam., ibid., p. 23. ♀. Mex.
12. *pacifica* Melander and Brues, Biol. bull., vol. 2, p. 42. ♂. (1902). Cal.

AMMOPHILA Kirby.

13. *abbreviata* Fabr., Syst. Piezatorum, p. 204. ♂ ♀. (1804). U. S., Mex., S. Amer.
14. *urnaria* Klug. Dahlb., Hym. Eur., vol. 1, p. 14, (1843). U. S.
15. *nigricans* Dahlb., *ibid.*, p. 14. ♂. Amer. bor.
intercepta Lep., Hym., vol. 3, p. 378. (1845).
procera Lep., *ibid.*, p. 376. ♀. (1845).
macra Cress., Proc. Ent. soc. Phil., vol. 4, p. 460. ♂. (1865).
16. *procera* Klug. Dahlb., Hym. Eur., vol. 1, p. 15. ♂ ♀. (1843). Amer. bor.
gryphus Smith, Cat. Hym. Brit. mus., vol. 4, p. 222. (1856).
17. *gracilis* Lep., Hym., vol. 3, p. 381. ♂ ♀. Can. U. S. Mex. (nec *gracilis* of Cameron).
18. *arvensis* Lep., *ibid.*, p. 384. ♂ ♀. Amer. bor.
19. *aberti* Haldeman, Stans. Gt. Salt Lake Exp., 368. (1852). West U. S.
Patton, Bull. U. S. geol. surv., vol. 5, p. 353. ♀ ♂. (1879).
20. *fragilis* Smith, Cat. Hym. Brit. mus., vol. 4, p. 219. ♂ ♀. (1856). Brazil, Mex., Costa Rica. Tex.
inepta Cresson, Trans. Amer. ent. soc., vol. 4, p. 209. ♂ ♀. (1872).
21. *breviceps* Smith, Cat. Hym. Brit. mus., vol. 4, p. 221. ♀. (1856). Mex.
varipes Cress., Proc. Ent. soc. Phil., vol. 4, p. 457. ♂ ♀. (1865). Col. Mex.
22. *atriceps* Smith, Cat. Hym. Brit. mus., vol. 4, p. 221. ♂ ♀. (1856). Mex.
23. *barbata* Smith, Ann. mag. nat. hist., (4), vol. 12, p. 260. ♀. (1873). Mex.
24. *yarrowi* Cress., Rept. Geogr. geol. surv., 100th mer., vol. 5, p. 713. ♂. (1873). Col.
25. *placida* Smith, Cat. Hym. Brit. mus., vol. 4, p. 221. ♂. (1856). Cal.
26. *saeva* Smith, *ibid.*, p. 222. ♀. Cal.
27. *conditor* Smith, *ibid.*, p. 223. Fla.
28. *ferruginosa* Cresson, Proc. Ent. soc. Phil., vol. 4, p. 455. (1865). Col.
29. *pruinosa* Cress., *ibid.*, p. 455. Col.
30. *collaris* Cress., *ibid.*, p. 456. Col.
31. *extremitata* Cress., *ibid.*, p. 457. Col., Tex., Ill., N. Mex.
pictipennis Walsh, Amer. ent., vol. 1, p. 164. (1869).
anomala Taschenberg, Zeitschr. ges. naturw., vol. 34, 434. (1869). Ill.
32. *polita* Cress., Proc. Ent. soc. Phil., vol. 4, 458. ♀. (1865). Col.
33. *vulgaris* Cress., *ibid.*, p. 458. ♂ ♀. Col., Tex., N. Mex., Ill.
34. *mediata* Cress., *ibid.*, p. 459. ♂ ♀. Col.
35. *strenna* Cress., *ibid.*, p. 459. ♀. Col., N. Mex.
36. *juncea* Cress., *ibid.*, p. 460. ♂. Col.
37. *miliaris* Cameron, Biol. Centr.-Amer. Hym., vol. 2, p. 3. ♂. (1888). Guatemala, Panama
38. *gaumeri* Cam., *ibid.*, p. 4. ♂. Guat., Mex.
39. *micans* Cam., *ibid.*, p. 5. ♀. Guat.
40. *iridipennis* Cam., *ibid.*, p. 5. ♂ ♀. Guat.
41. *centralis* Cam., *ibid.*, p. 6. ♂. Guat.
42. *aureonotata* Cam., *ibid.*, p. 7. ♂ ♀. Mex.
43. *ceres* Cam., *ibid.*, p. 8. ♂. Guat.
44. *zanthoptera* Cam., *ibid.*, p. 8. ♀. Guat.
45. *championi* Cam., *ibid.*, p. 9. ♀. Guat.

46. *striolata* Cam., ibid., p. 10. ♀. Mex.
47. *alticola* Cam., ibid., p. 10. ♂. Mex.
48. *trichiosoma* Cam., ibid., p. 11. ♂. Guat.
49. *picipes* Cam., ibid., p. 11. ♂. Mex.
50. *consors* Cam., ibid., p. 12. ♂ ♀. Mex.
51. *nigrocaerulea* Cam., ibid., p. 12. ♂. Mex.
52. *montezuma* Cam., ibid., p. 13. ♂. Mex.
53. *dejecta* Cam., ibid., p. 14. Mex.
54. *cora* Cam., ibid., p. 14. ♂. Guat.
55. *azteca* Cam., ibid., p. 17. ♀. Mex.
56. *voltanica* Cam., ibid., p. 17. ♀. Panama.
57. *chiriguensis* Cam., ibid., p. 18. ♀. Panama.
58. *comanche* Cam., ibid., p. 19. Mex.
59. *nearctica* Kohl, Verh. zool.-bot. ges. Wien, vol. 34, p. 18. ♂. 1889. Wash.
60. *femur-rubrum* Fox, Proc. Cal. acad. sci., (2), vol. 4, p. 102. ♀. (1894). L. Cal.
61. *nasalis* Provancher, Nat. can. vol. 20, p. 111. ♂. (1895). Cal.
62. *guerinii* Dalla Torre, Cat. Hym., vol. 8, p. 400. (1897). Cuba.
apicalis Guérin, Icon. reg. anim., vol. 7, p. 435. (1845).

COLOPTERA Fabr.

63. *wrightii* Cresson, Trans. Amer. ent. soc., vol. 4, p. 378. ♀. (1872), Tex., N. Mex.

HULL ZOOLOGICAL LABORATORY
 The University of Chicago,
 May 25, 1903.

THE NORTH AMERICAN ANTS OF THE GENUS STENAMMA SENSU STRICTO.¹

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 YORK, N. Y.

There is a good deal of confusion in regard to the two described North American species of *STENAMMA sensu stricto*, owing to imperfect knowledge of the sexual forms of one of the species. *Stenamma nearcticum* was described by Mayr from two male and two female specimens taken towards the end of October in California. To the same species he referred two workers, one from New Hamp-

¹ Contributions from the Zoological Laboratory of the University of Texas. No. 51.